



A.D. 1854 N° 1731.

S P E C I F I C A T I O N

OF

HENRY DIRCKS.

STEAM-BOILER AND OTHER FURNACES.

L O N D O N :

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,

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25, SOUTHAMPTON BUILDINGS, HOLBORN.

Price 3d

1855.



A.D. 1854 N° 1731.

Steam-Boiler and other Furnaces.

(This Invention received Provisional Protection, but notice to proceed with the application for Letters Patent was not given within the time prescribed by the Act.)

PROVISIONAL SPECIFICATION left by Henry Dircks at the Office of the Commissioners of Patents, with his Petition, on the 8th August 1854.

I, HENRY DIRCKS, of the Patent Agency Office, 32, Moorgate Street, in the City of London, Engineer, do hereby declare the nature of the said Invention for “**IMPROVEMENTS IN STEAM ENGINE BOILER FURNACES AND OTHER FURNACES FOR THE PREVENTION OF SMOKE**” to be as follows:—

My said Invention refers to peculiarly constructed perforated air-distributing apparatus, for supplying air in a divided form to the crude gases arising from the fuel, and which apparatus are in the form of boxes, plates, bars, bricks, tiles, or fire lumps, made of iron or fire clay, and placed on, above, and around the furnace doors, or in any convenient part of furnaces best suited for their introduction. When in bars or slabs they may have grooved sides, which when laid together will thus afford a series of perforations.

I employ various kinds of air valves. Sometimes, by sliding one perforated plate over a fixed perforated plate, I thereby close or open the apertures. I also alternate round or nearly round bars with bars flat at top, but grooved at their sides, to receive the round bars, which, being all perforated in one direction, can be closed by partially turning the bars by a suitable handle and rods or cranks, bringing the apertures against the blank side of each adjoining bar. A Venetian arrangement of air valves may also be used, or the air may

Dircks' Improvements in Steam-Engine Boiler Furnaces, &c.

be admitted under the dead plate, made to rise up from the back, drawing up with it an attached semicircular perforated plate or air-distributor.

All the said perforations may be round, square, slotted, or of any other form. I prefer them not to exceed three quarters of an inch in width or diameter, but they may be wider, particularly when by sliding or other like valves their area 5 can be diminished. The air valves may be operated by self-closing apparatus when required.

For increasing the draught of air through the perforated air-distributors I sometimes use a fan blast, or by means of elevated air-tubes, surmounted with a cowl turning to the wind, I introduce a natural blast or current of air; or 10 the current of air through the apparatus may be promoted by a jet of steam variously applied.

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Printers to the Queen's most Excellent Majesty. 1855.